

2. An electroluminescence display device according to claim 1 wherein said transparent electrode comprises indium tin oxide.

Cont'd
3. An electroluminescence display device according to claim 1 wherein said barrier metal layer contains nitrogen.

6. An electroluminescence display device comprising:

a substrate having an insulating surface;

a first thin film transistor disposed over said substrate, wherein said first thin film transistor comprises an active layer comprising crystalline silicon including source, drain and channel regions, and a gate electrode adjacent to the channel region;

a second thin film transistor disposed over said substrate, said second thin film transistor comprising an active layer comprising crystalline silicon including source, drain and channel regions, and a gate electrode adjacent to the channel region, said gate electrode of the second thin film transistor being electrically connected to said drain region of the first thin film transistor;

an electrode comprising aluminum for electrically connecting said transparent electrode and said drain region of the second thin film transistor; and

an electroluminescence layer comprising an organic material disposed adjacent to said transparent electrode,

wherein a direct contact between said electrode and said transparent electrode and a direct contact between said electrode and said drain region of the second thin film transistor are prevented by a barrier metal layer comprising titanium interposed therebetween.

7. An electroluminescence display device according to claim 6 wherein said barrier metal layer further contains nitrogen.

8. An electroluminescence display device according to claim 6 further comprising a counter electrode opposed to said transparent electrode with said organic

electroluminescence layer interposed therebetween, wherein said counter electrode comprises magnesium and silver.

Multi

Contd

C1

9. An electroluminescence display device comprising:
a substrate having an insulating surface;
a thin film transistor formed over said substrate, said thin film transistor comprising an active layer comprising crystalline silicon including source, drain and channel regions;
an electrode comprising aluminum electrically connected to one of said source and drain regions;
a barrier metal layer interposed between said electrode and said one of the source and drain regions to prevent a direct contact therebetween;
a transparent electrode electrically connected to said thin film transistor;
an organic electroluminescence layer adjacent to said transparent electrode;
an electroluminescence layer comprising an organic material disposed adjacent to said transparent electrode, and
a peripheral driving circuit comprising another thin film transistor formed over said substrate,
wherein said barrier metal layer comprises titanium.

10. An electroluminescence display device comprising:
a substrate having an insulating surface;
at least one X-direction signal line over said substrate;
at least one Y-direction signal line crossing said X-direction signal line;
a thin film transistor formed over said substrate at an intersection of said X-direction signal line and said Y-direction signal line, said thin film transistor comprising an active layer comprising crystalline silicon including source, drain and channel regions;
a transparent electrode electrically connected to said thin film transistor;
an electroluminescence layer comprising an organic material adjacent to said transparent electrode; and

cont'd
a peripheral driving circuit comprising another thin film transistor formed over said substrate for supplying a signal to one of said X-direction signal line and said Y-direction signal line wherein said another thin film transistor has an active layer comprising crystalline silicon.

15. An electroluminescence display device comprising:

a substrate having an insulating surface;

at least one X-direction signal line over said substrate;

at least one Y-direction signal line crossing said X-direction signal line;

at least one pixel defined at an intersection between the X-direction signal line and the Y-direction signal line;

at least one switching thin film transistor and one current control thin film

E 2 transistor provided over the substrate in said pixel;

an electroluminescence layer comprising an organic material over the substrate;

and

a peripheral driving circuit comprising at least a third thin film transistor formed over said substrate for supplying a signal to at least one of said X-direction signal line and said Y-direction signal line,

wherein each of the switching thin film transistor, the current control thin film transistor and the third thin film transistor comprises a semiconductor layer comprising crystalline silicon and including source, drain and channel regions, a gate insulating film adjacent to the semiconductor layer and a gate electrode adjacent the gate insulating film.

E 3 17. An electroluminescence display device comprising:

a substrate having an insulating surface;

at least one X-direction signal line over said substrate;

at least one Y-direction signal line crossing said X-direction signal line;

at least one pixel defined at an intersection between the X-direction signal line and the Y-direction signal line;

at least one switching thin film transistor and one current control thin film transistor provided over the substrate in said pixel;

an electroluminescence layer comprising an organic material over the substrate;
and

a peripheral driving circuit comprising at least a third thin film transistor formed
over said substrate for supplying a signal to at least one of said X-direction signal line
and said Y-direction signal line,

Cont'd
E3 wherein each of the switching thin film transistor, the current control thin film
transistor and the third thin film transistor comprises a semiconductor layer comprising
crystalline silicon and including source, drain and channel regions, a gate insulating film
adjacent to the semiconductor layer and a gate electrode adjacent the gate insulating
film, and is manufactured through the same process.

E4 [Please add new claim 19 as follows:]

--19. An organic electroluminescent display device, wherein a pixel array
composed of an organic electroluminescent device is provided on an insulating
substrate, an island having a polycrystalline silicon semiconductor formed thereon in a
predetermined pattern is provided on said substrate, and a thin film transistor formed in
the island is used as a pixel driving device and a peripheral driving circuit device.--